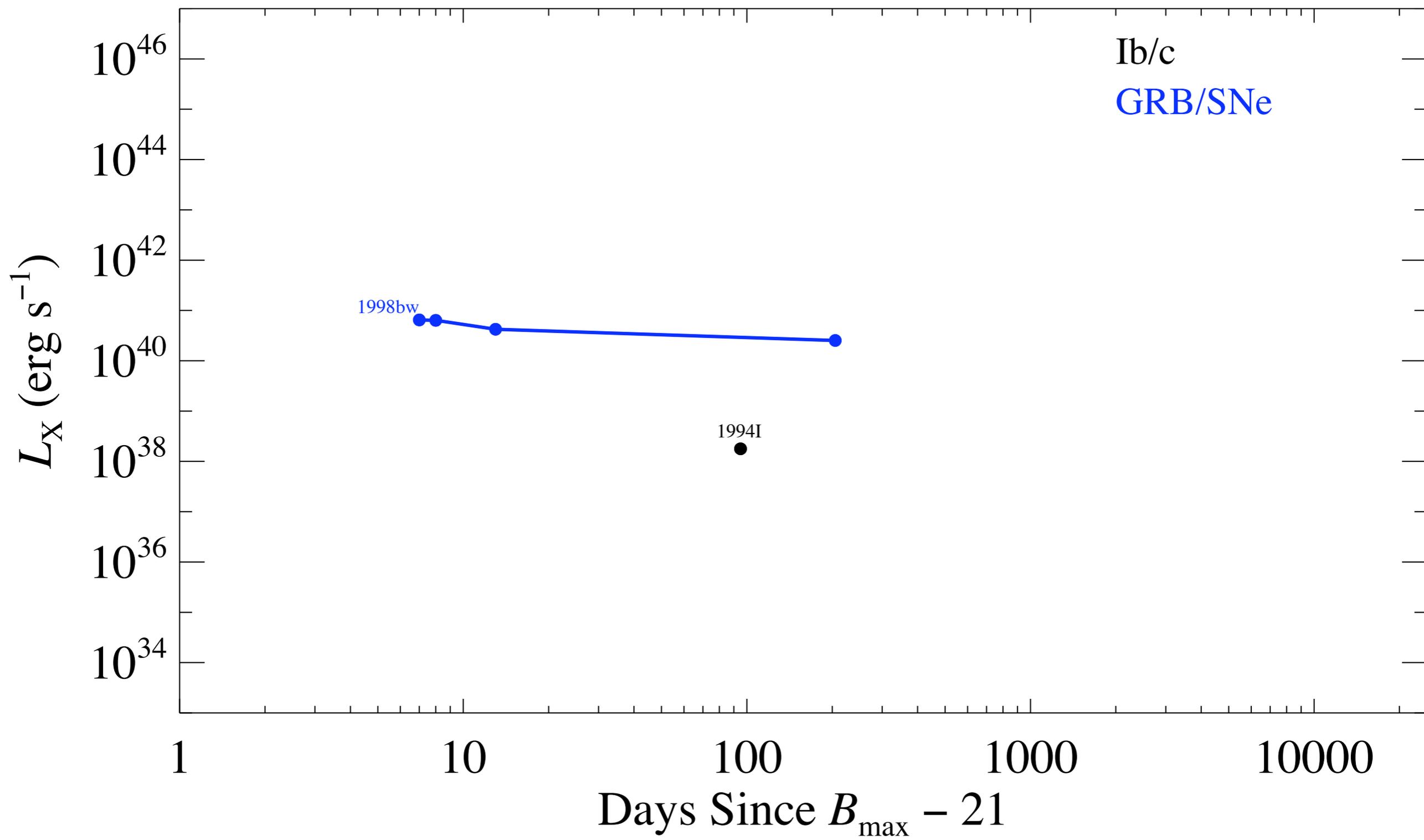


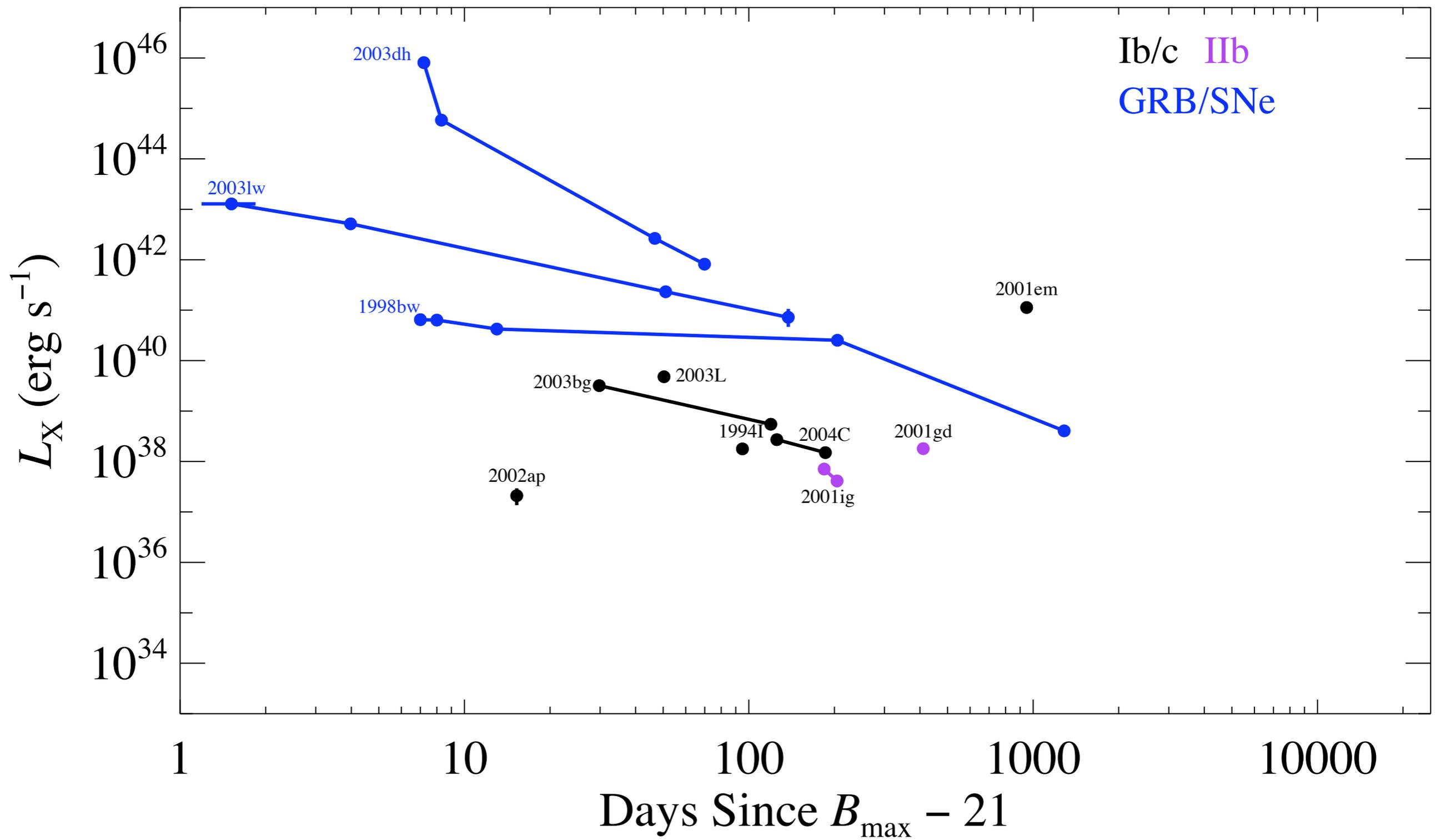
# The X-ray Emission of Type Ib/c Supernovae

David Pooley  
UC Berkeley

# Pre-*Chandra*/*XMM*



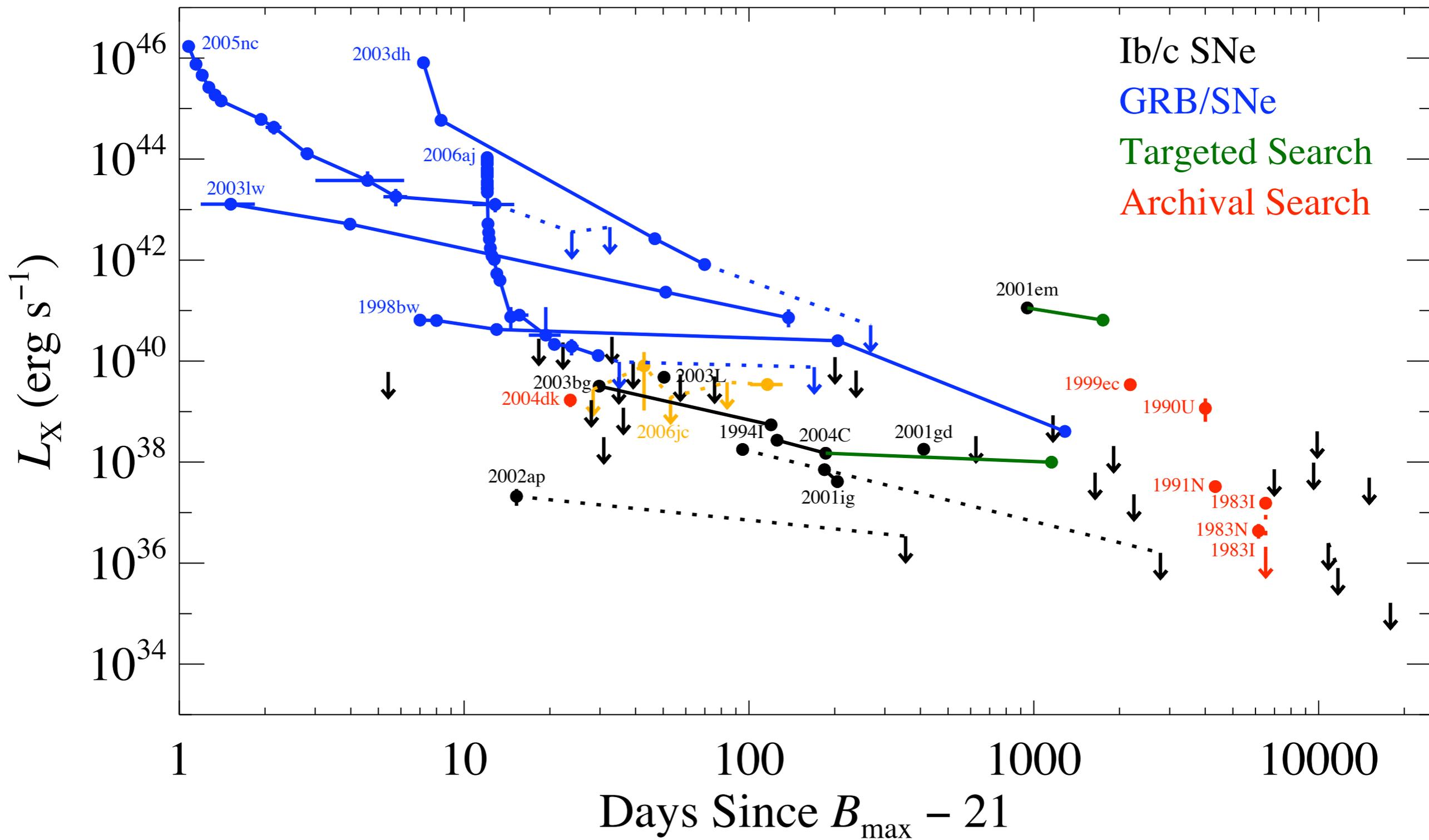
# After a few years of *Chandra/XMM*



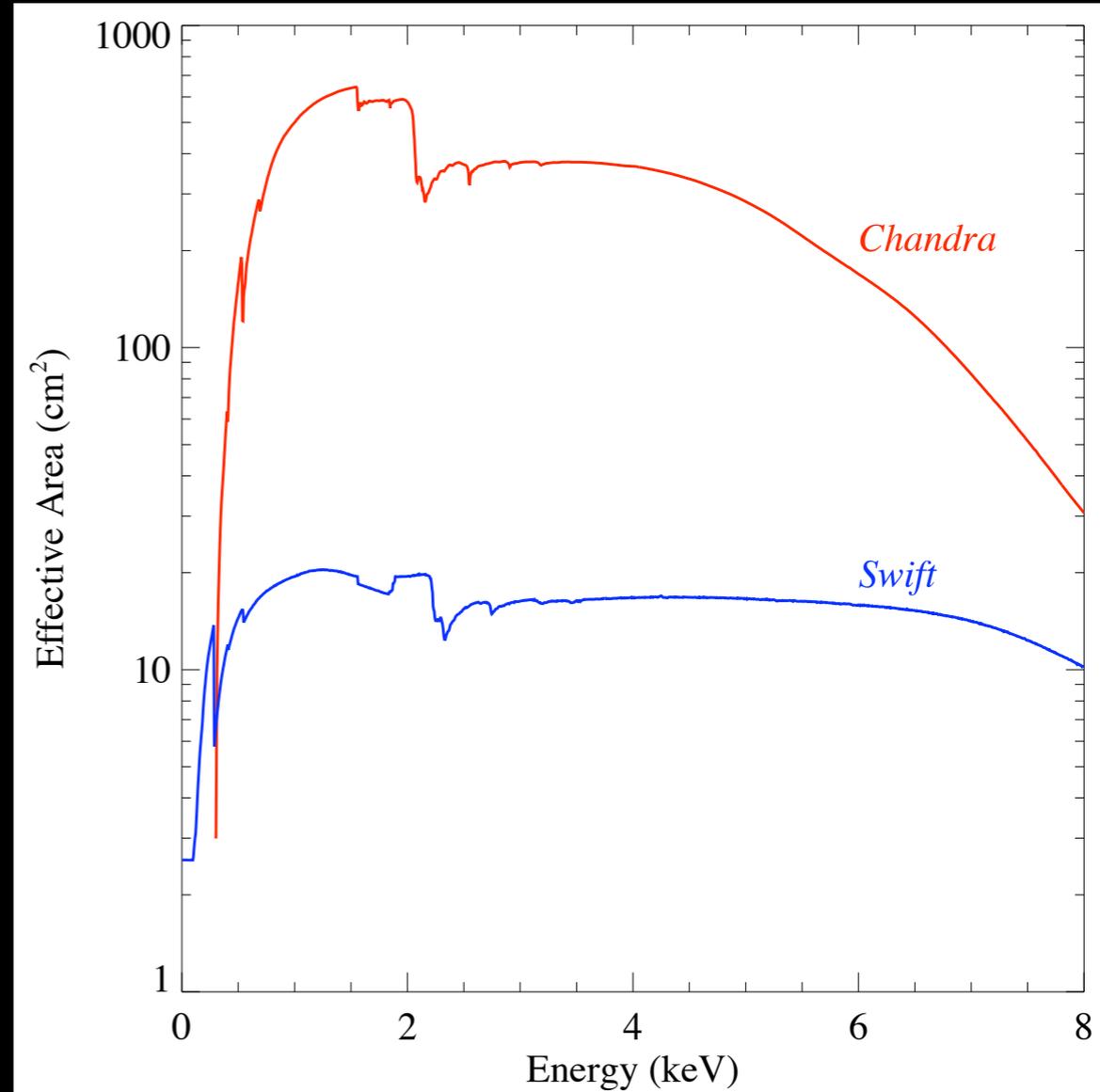
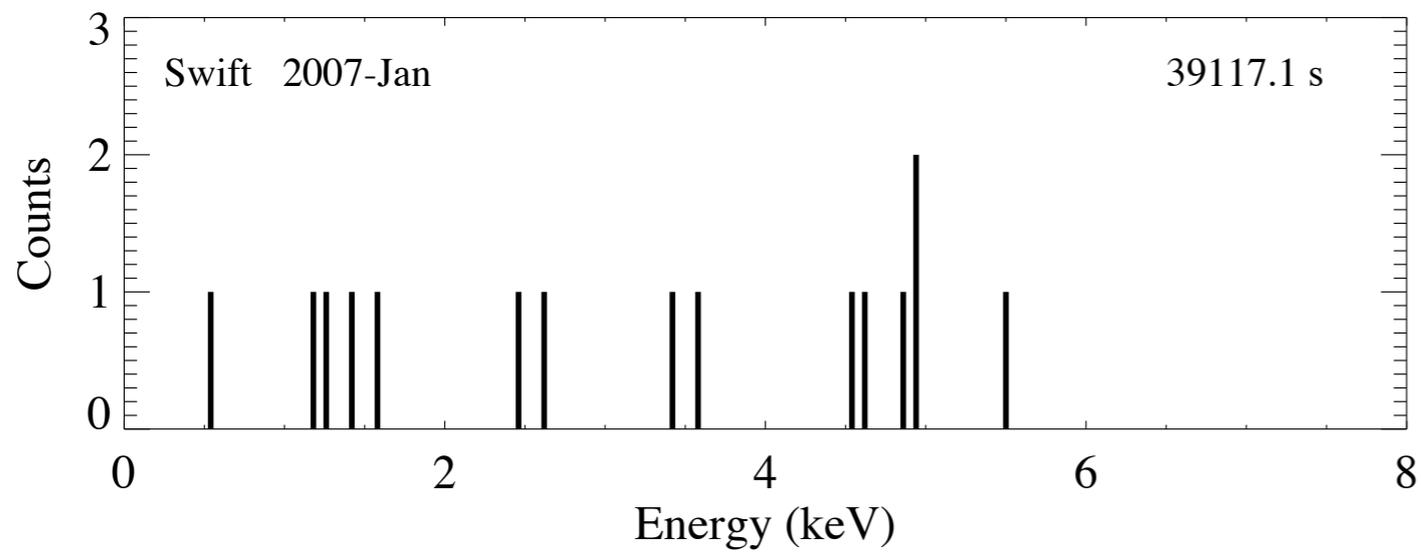
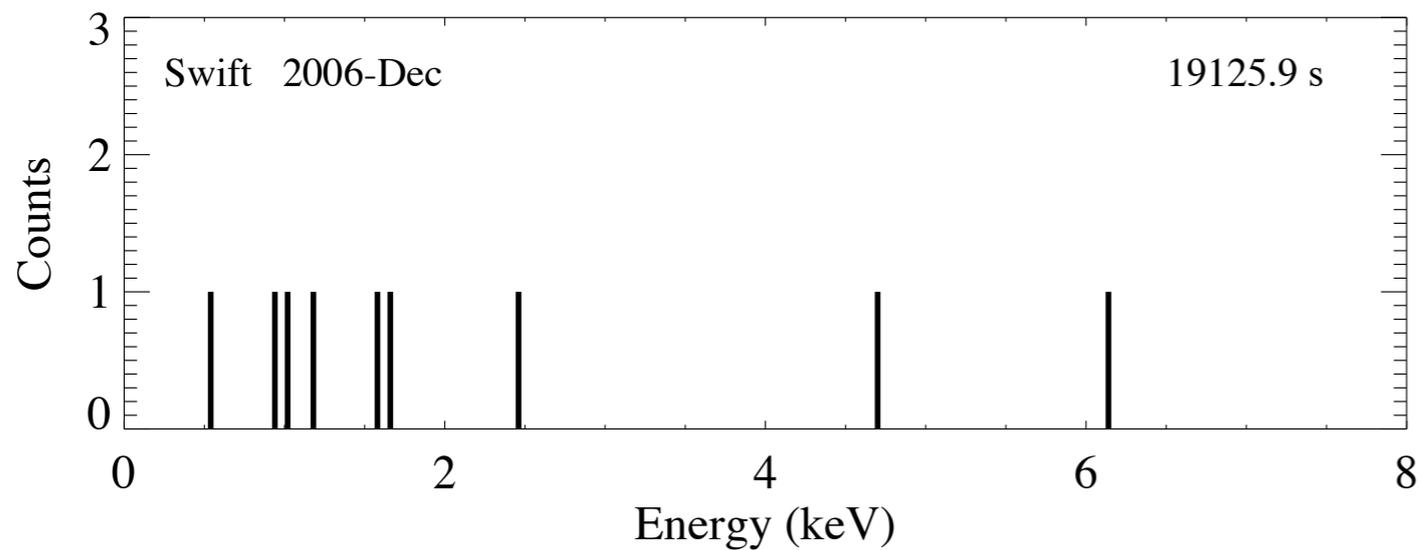
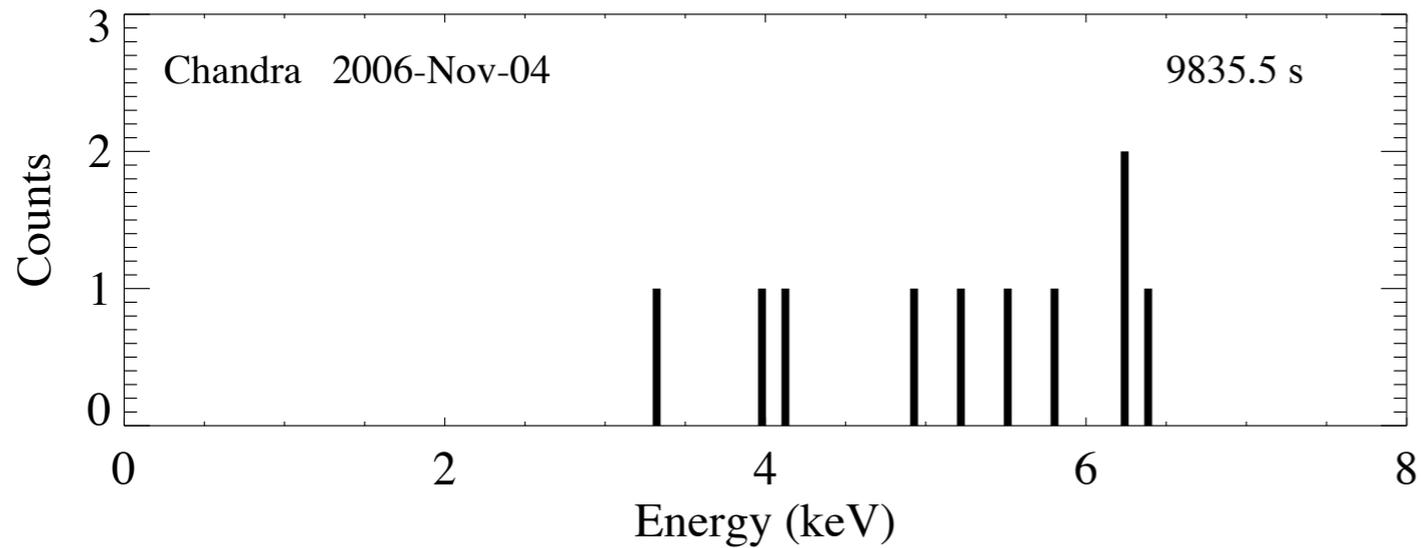
# Search for X-ray emission from SNe Ib/c

- ◆ Propose new observations of known X-ray SNe (*Co-I's: Chevalier, Filippenko, Immler, Lewin, Nomoto, & Weiler*)
  - ◆ *XMM*: 2001em, 2003bg (last cycle)
  - ◆ *Chandra*: 2001em, 2004C, 2006aj (current cycle)
- ◆ Check *Chandra*, *XMM*, and *Swift* archives for all known SNe Ib/c (from catalogs: CfA, Padova-Asiago, Sternberg, Szeged, M. Richmond)
  - ◆ 48 SNe with post-explosion data
    - ◆ 106 *Chandra* observations  $\Rightarrow$  3.3 Msec
    - ◆ 83 *XMM* observations  $\Rightarrow$  2.6 Msec
    - ◆ 300 *Swift* observations  $\Rightarrow$  1.4 Msec

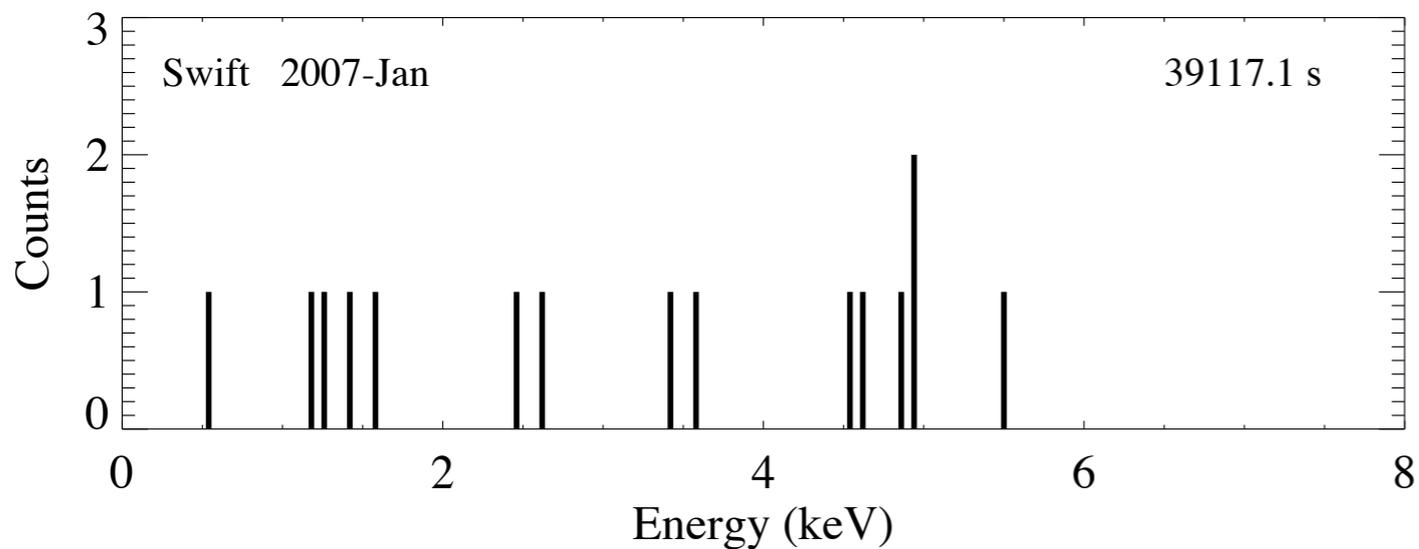
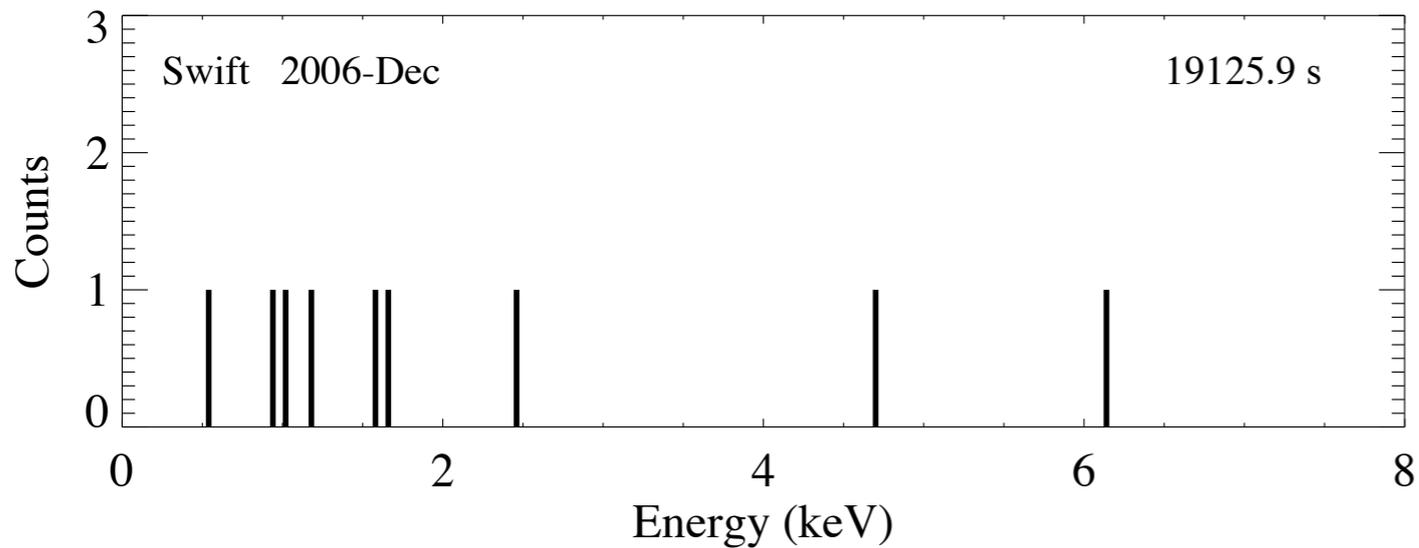
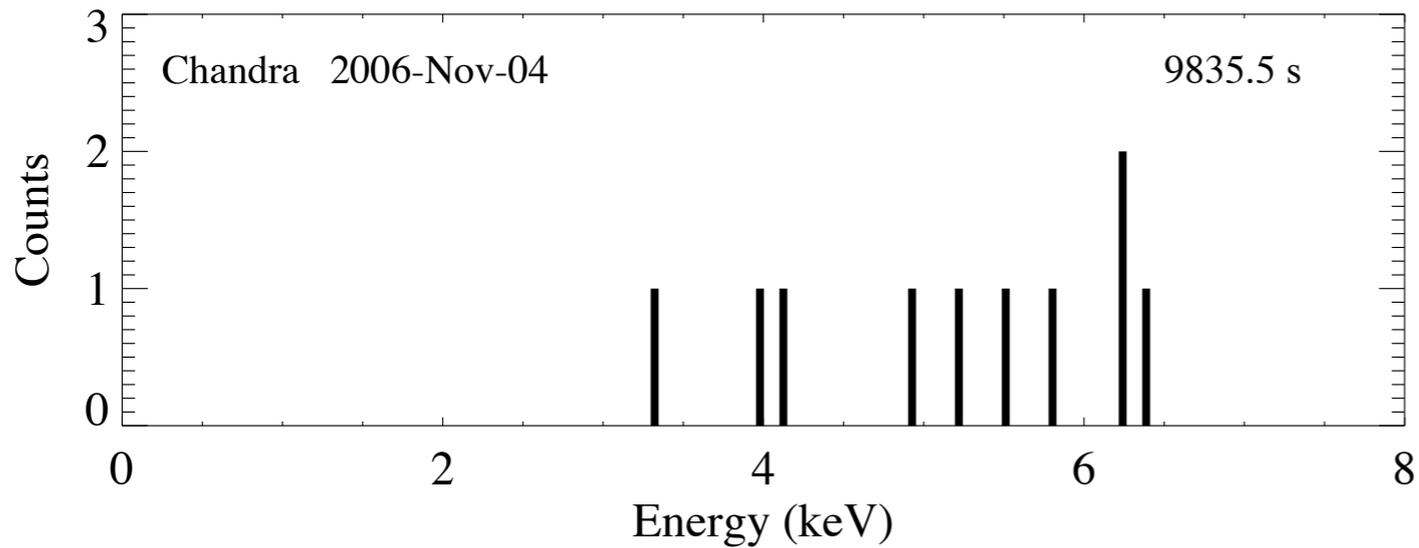
# Current Status



# SN 2006jc



# SN 2006jc



Date	Counts $\text{cm}^{-2} \text{s}^{-1}$	
	0.5 - 3 keV	3 - 8 keV
2006 Nov 4	0	4.6
2006 Dec	20.8	6.8
2007 Jan	10.2	13.3

Date	Counts	
	0.5 - 3 keV	3 - 8 keV
2006 Nov 4	0	10
2006 Dec	7	2
2007 Jan	7	8

# Sample of X-ray emitting lb/c's

Before 1999: 2

Currently: **19 (20?)**

**6 (7?)** from archival search

Sam

Bo

C

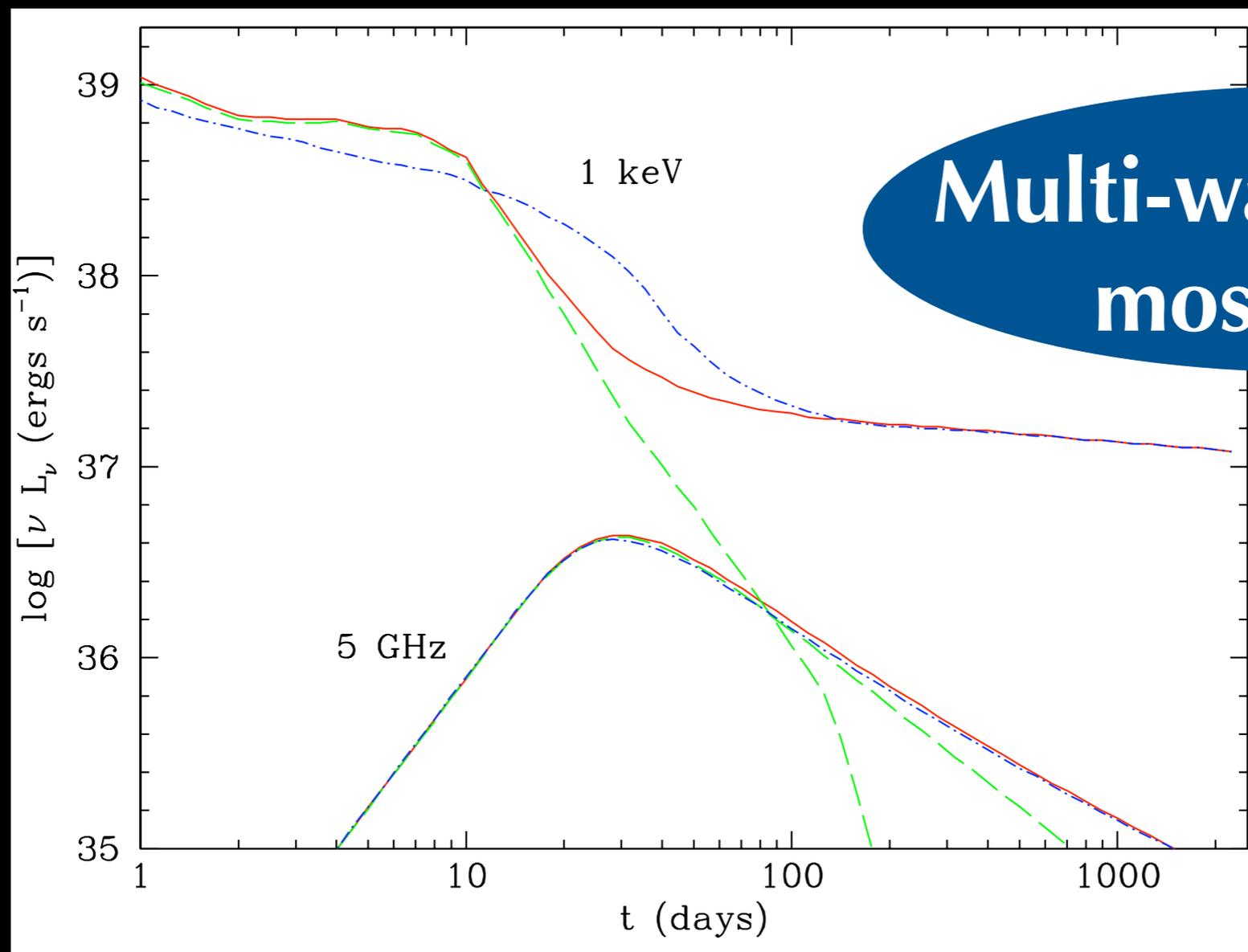


arch

Science to be done: investigate origin of X-ray emission (thermal vs. IC vs. synchrotron)

Limited spectral information

X-ray lightcurves could prove useful



*Chevalier & Fransson 2007 (astro-ph/0607196)*